

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Claims 1-19 (Cancelled)

20. (Previously presented) An isolated polynucleotide which encodes a GLP-2 receptor selected from:

(a) a human GLP-2 receptor comprising the amino acid sequence of amino acids 67-553 of SEQ ID NO:12;

(b) a mammalian homolog of (a) which exhibits the functional characteristic of selectively binding GLP-2, and

(c) a variant of (a) or (b) which exhibits the functional characteristic of selectively binding GLP-2, the variant comprising at least one amino acid substitution, wherein the substitution is (i) a conservative substitution when at a position conserved across receptor (a), and/or (ii) a conservative or non-conservative substitution when at a position not conserved across receptor (a).

21. (Previously presented) An isolated polynucleotide which encodes a GLP-2 receptor according to claim 20 wherein said GLP-2 receptor is a human GLP-2 receptor comprising the amino acid sequence of amino acids 67-553 of SEQ ID NO:12.

22. (Previously Presented) An isolated polynucleotide according to claim 20, comprising nucleotides 320-1780 of SEQ ID NO:11.

23. (Previously presented) An isolated polynucleotide according to claim 20, wherein said polynucleotide encodes a variant of said human GLP-2 receptor, said variant comprising a substitution of Arg85.

24. (Previously Presented) An isolated polynucleotide according to claim 23, which encodes a Glu85 variant.

25. (Cancelled).

26. (Currently amended) An isolated polynucleotide according to claim 20, wherein said polynucleotide encodes for the human GLP-2 receptor ~~and said polynucleotide encodes for the amino acid sequence~~ of amino acids 26-553 of SEQ ID NO.:12.

27. (Previously Presented) An isolated polynucleotide according to claim 20, wherein said polynucleotide encodes for the human GLP-2 receptor and said polynucleotide encodes for the amino acid sequence which is at least 95% identical to amino acids 26-553 SEQ ID NO:12.

28. (Previously Presented) An isolated polynucleotide which hybridizes under conditions of high stringency with a polynucleotide according to claim 20, or with the complement of said polynucleotide.

29. (Previously Presented) An oligonucleotide comprising at least 15 nucleotides and having a polynucleotide sequence that hybridizes under conditions of high stringency to a polynucleotide according to claim 20 or with the complement of said polynucleotide.

30. (Previously Presented) An oligonucleotide according to claim 29, wherein the nucleotide sequence of the oligonucleotide corresponds identically with a region of the polynucleotide defined in claim 22 or with the complement of said polynucleotide.

31. (Previously Presented) An oligonucleotide according to claim 29, wherein the nucleotide sequence of the oligonucleotide corresponds identically with a region common to the polynucleotides defined in claim 22, or with the complement of said polynucleotide.

32. (Previously Presented) In labeled form, a polynucleotide selected from a polynucleotide as defined in claim 20.

33. (Previously Presented) A recombinant polynucleotide comprising a GLP-2 receptor-encoding polynucleotide as defined in claim 20, and expression controlling elements linked operably therewith to drive expression thereof.

34. (Previously Presented) A cell that has been genetically engineered by the incorporation expressibly therein of a polynucleotide according to claim 20.
35. (Previously Presented) The cell according to claim 34, which is a mammalian cell.
36. (Previously Presented) An antibody which selectively binds to a GLP-2 receptor coded for by the polynucleotide according to claim 28.
37. (Previously Presented) A cell membrane preparation derived from a cell according to claim 34.
38. (Previously Presented) A method for identifying GLP-2 receptor ligands comprising:
- (a) incubating a candidate ligand with a cell as defined in claim 35 or with a membrane preparation obtained therefrom, and then
 - (b) determining whether binding between the GLP-2 receptor and the candidate ligand has occurred.
39. (Currently Amended) A method for identifying GLP-2 receptor ligands, comprising the steps of:
- (a) identifying a cell expressing a functional GLP-2 receptor comprising the amino acid sequence of amino acids 67-553 of SEQ ID NO:12,
 - (b) incubating a candidate ligand with the cell that expresses a functional GLP-2 receptor, or with a membrane preparation derived from said cell; and
 - (c) determining whether binding between the GLP-2 receptor and the ligand has occurred.
40. (Previously Presented) A method according to claim 39, wherein the candidate ligand is incubated with a cell that produces a functional GLP-2 receptor, and the determination whether binding has occurred between the GLP-2 receptor and the ligand candidate is achieved by

measuring change in the intracellular cAMP level, an increase in the cAMP level indicating that the candidate ligand is a GLP-2 agonist.

41. (Previously Presented) An isolated polynucleotide according to claim 20, comprising a nucleotide sequence having at least 80% sequence identity to nucleotides 320-1780 of SEQ ID NO:11, wherein said polynucleotide encodes a mammalian GLP-2 receptor that exhibits the functional characteristics of selectively binding GLP-2.

42. (Previously Presented) An isolated polynucleotide according to claim 20, wherein said nucleotide sequence has at least 90% sequence identity to nucleotides 320-1780 of SEQ ID NO:11, wherein said polynucleotide encodes a mammalian GLP-2 receptor that exhibits the functional characteristics of selectively binding GLP-2.

43. (Previously Presented) An isolated polynucleotide according to claim 20, wherein said nucleotide sequence has at least 95% sequence identity to nucleotides 320-1780 of SEQ ID NO:11, wherein said polynucleotide encodes a mammalian GLP-2 receptor that exhibits the functional characteristics of selectively binding GLP-2.